REMARKS

Applicant discussed the status of this case with Supervisory Examiner Shackelford on August 30, 2005. Applicant sought to discuss the Final Office Action with Examiner Peavey. Supervisory Examiner Shackelford informed Applicant that Examiner Peavey no longer has responsibility for this case, and that Applicant's arguments should be resubmitted for reconsideration. Accordingly, Applicant requests reconsideration of the pending claims. In particular, the Final Office Action fails to address Applicant's requests, presented again below, concerning the lack of teaching (1) raised portions on an annular fold, (2) a plurality of raised portions, or (3) raised portions comprising burls.

Claims 1-20 are pending in the application. Claims 1 and 14 are independent claims from which all other claims depend. In response to the prior Office Action, claims 1 and 14 were amended for purposes of clarity, claim 10 was amended for purposes of clarity, claims 2 and 15 were cancelled, and the remaining amendments were made to correct claim dependencies in view of cancelled claims 2 and 15.

Claims 1-3, 7, 10-12, 14-17, and 19 stand rejected under 35 U.S.C. §102(b) as being anticipated by Hayward, U.S. Patent No. 6,227,748. Claims 4-6, 8, 9, 13, 18 and 20 also stand rejected under 35 U.S.C. §103 as being unpatentable over Hayward.

Independent claims 1 and 14 have similar limitations, and will therefore be described together. Each of claims 1 and 14 regards a convoluted boot made of an elastic material for sealing an annular joint chamber of a universal joint. The boot comprises a plurality of annular folds wherein each of the annular folds comprises a first annular outer flank facing the first collar, and a second annular outer flank facing the second collar. At least one of the annular folds comprises a plurality of raised portions comprising burls which project from a uniform annular face (claim 1), or a plurality of recesses comprising indentations which are set back from the uniform annular face (claim 14). The plurality of raised portions or recesses provided on an outer flank of at least one annular fold inhibits noise from developing when adjacent flanks of an annular fold contact each other during operation of the universal joint at relatively large articulation angles.

In contrast, Figures 1 and 4 of Hayward disclose a convoluted boot (10) for sealing an annular chamber between an outer joint part and a shaft (31) connected to an inner joint part of a universal joint. An object of the Hayward boot is to enhance the flexibility of the wider end portion of the boot. (See Col. 1, lines 63, 64). Therefore, the wider end portion (12) of the boot is stepped to define a number of annular fitting sections (14, 15, 16) of progressively increasing diameter ach of which extend generally parallel to the boot axis. (See Col. 4, lines 18-24). Three such sections (14, 15, 16) are shown in the drawings and, in particular, Figure 4 referred to in the Office Action.

The notches (47) of Hayward are completely different than Applicant's claimed raised portions (claim 1) or recesses (claim 14). The notches (47) that are shown in Figures 3 and 4 and referred to in column 5, lines 37-57 of Hayward are for bounding each seating area. From this, it follows that the notches (47) are annularly arranged on the boot. This is also clear from column 5, lines 54-56 where it is stated that the channels provide fitting surfaces with the notches (46, 47) acting to prevent displacement of the fixing strip (49). Because the notches (46, 47) are arranged at the seating area for connecting a fixing strip, and because they are annular around the boot, they are not at all comparable with the claimed plurality of raised portions or recessed portion arranged on an annular fold.

The same reasoning applies to the ridges (25) and the beads (27) show in Figure 1 of Hayward. Hayward disclose that each flat portion (23) has ridges (25) on its inner surface, and its outer surface is bounded by an upstanding rib (26) and a bead (27) at that side which is further from the central portion (11). (Col. 5, lines 36-43 in view of Figure 1). Each flat portion 23 bounded by the respective upstanding rib (25) and bead (26) on the one side, and by the transition fold (28) on the other side, defines a seating channel (20-22) to receive a fixing strap or tie. (Col. 5, lines 50-54). The words "rib" and "bead" and the recited function "to receive a fixing strap" make it clear that the rib and the bead are also arranged annularly around the longitudinal axis. Neither the rib, which is arranged on the inner surface of the boot, nor the bead which is arranged on the flat portion of the boot would be able to contact the surface of the next fold.

Accordingly, independent claims 1 and 14 are novel in view of Hayward. Specifically, claim 1, as amended, differs from Hayward because Hayward fails to disclose or suggest at least the following claimed features:

1) That the raised portions are arranged on at least one of the annular folds;
2) That at least one of the annular folds comprises a plurality of raised portions; and
3) The raised portions comprise burls.

Rather, Hayward only discloses seating areas for fixing elements rather than Applicant's claimed folds, and a single annular notch in contrast to Applicant's claimed plurality of raised portions.

Similarly, claim 14 is novel and non-obvious in view of Hayward because Hayward fails to disclose or suggest the following claimed features:

1) That recesses which are set back from a uniform annular face are arranged on at least one of the annular folds;
2) That at least one of the annular folds comprises a plurality of recesses; and
3) That the recesses comprise indentations.

Because Hayward fails to disclose any recesses at all, the subject matter of claim 14 is clearly novel over Hayward, and the rejections under 35 U.S.C. §102 against claims 1, 3, 7, 10-12, 14-17 and 19 should be withdrawn. For at least the same reasons as set forth above with respect to claims 1 and 14, the rejections under 35 U.S.C. §103 should also be withdrawn because the Hayward reference relied upon in the Office Action fails to disclose or suggest each and every element of Applicant's claimed invention.

Applicant further submits that a *prima facie* case of obviousness has not been established with respect to claims 4-6, 8, 9, 18 and 20. Applicant reiterates that the obviousness rejection cannot be maintained in view of the complete lack of teaching of several elements of independent claims 1 and 14 from which all other claims depend. Further, the rejections should be withdrawn as there is no suggestion or motivation to modify the Hayward reference to include a plurality of projections on a face of an annular fold, or a plurality of indentations on a face of an annular fold. Rather, the Office Action relies upon the knowledge generally available to one of skill in the art and supports the rejection on the basis of discovering the optimum or workable ranges involved. However, no specific reasoning is provided to substantiate this assertion, as is required. *In re Chu*, 36 USPQ2d 1089, 1094 (Fed. Cir. 1995) (Reversing an obviousness rejection because the Patent Office provided no specific reasoning to support the assertion of design choice.) Accordingly, the knowledge generally available to one of skill in the art would not suggest having a plurality of projections or plurality of indentations to prevent noise when opposing flanks of annular folds contact one another at large operating angles of the universal joint. The fact that one of skill in the art has the capabilities to arrive at the invention is not the test of whether one of skill in the art would have arrived at the invention based on the teachings of the prior art. *Ex Parte Levengood*, 28 USPQ2d 1300-02 (BPAI 1993) ("That which is within the capabilities of one skilled in the art is not synonymous with obviousness.") The focus must remain on what the prior art suggested to one of skill in the art at the time the invention was made.

Critically, none of the prior art references relied upon in the Office Action discloses or suggests Applicant's claimed features which diminish noise when outer surfaces of the boot contact one another. Specifically, the presently claimed boot achieves a reduction in the development of noise by providing raised portions arranged on at least one of the annular folds wherein the at least one annular fold comprises a plurality of raised portions, and the raised portions comprise burls. Hayward shows the opposite, as none of the folds of the convoluted central portion (11) have any raised portions at all.

Thus, Applicant submits that one of skill in the art would not be motivated to modify the Hayward reference as the Office Action proposes because the Hayward reference is directed toward a completely different problem. In other words, the Office Action errs in defining the problem facing the Applicant of the present invention in terms of its solution. That is, the Office Action's formulation of the problem confronting the Applicant (the need to reduce noise between adjacent flanks of annular folds) presumes the solution to the problem (added plurality of burls or recesses). "Defining the problem in terms of its solution reveals improper hindsight in the selection of the prior art relevant to obviousness." *Monarch Knitting Machinery v. Sulzer Morat GmbH*, 139 F.3d 877, 881 (Fed. Cir. 1998). Also, to say that the missing claimed features come from the nature of the problem to be solved, evidences improper hindsight reconstruction because the Office Action fails to show that this problem is identified in the Hayward reference. *In Re Zurko*, 111 F.3d 887, 890 (Fed. Cir. 1997). Thus, although the Office Action purports to recognize the need to identify a suggestion or motivation to modify the prior art, it fails to do so and, indeed, succumbs to the allure of using the claimed invention as a template for modifying the prior art. *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577 (Fed. Cir. 1984) ("It is impermissible to use the patent itself as the source of suggestion.") The focus must remain on what the prior art suggested to one of skill in the art at the time the invention was made, as obviousness cannot be established by combining pieces of prior art absent some "teaching, suggestion, or incentive supporting the combination." *In re Geiger*, 815 F.2d 686, 688 (Fed. Cir. 1987).

The Applicant therefore submits that the present claims are allowable because the prior art relied upon does not disclose or suggest each and every feature of Applicant's claimed invention. Further no valid reason has been shown as to why of one of ordinary skill in the art would modify the Hayward reference to arrive at the claimed invention, particularly since the Hayward reference is directed toward issues unrelated to reducing noise in convoluted boots operated at large articulation angles.

Accordingly, Applicant submits that the rejections under 35 U.S.C. §102 and §103 should be withdrawn, and a Notice of Allowance indicating the allowability of claims 1, 3-14, and 16-20 should be issued. The Examiner is invited to telephone the Applicants' undersigned attorney at (248) 223-9500 if any unresolved matters remain.

Respectfully submitted,

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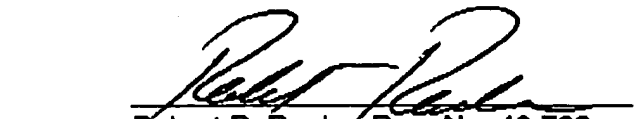

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